

Associated Factors for Uterine Prolapse

Gautam S,¹ Adhikari RK,² Dongol A³

¹Program KUSMS, ²Department of Community medicine, ³Department of Obstetrics and Gynecology.

ABSTRACT

Background: Uterine prolapsed is a significant public health problem in Nepal.

Methods: The study was conducted in 50 women having second and third degree of uterus prolapse who were admitted in Dhulikhel Hospital for vaginal hysterectomy. A total 200 individual were taken as a control groups who were OPD attendants of Dhulikhel hospital without any sign or had no any sign and symptom of uterus prolapse . Data were collected by structured and semi-structured questionnaires and analysis done by using z test.

Results: The occurrence of uterus prolapse had significant difference among ethnicity (p value-< 0.001), level of education (p value- <0.001) and occupation of respondents (p value-0.0000). There was no significant difference in the age at birth of first child between the groups (p value 0.138). Parity, gravida and age of the last child birth (p value-.040, .025, 003 respectively) comprised of significant differences. There was significant difference between duration of rest after delivery ($z\alpha= 16.53$), days of household work started ($z\alpha 14.24$) and days of heavy load lifting started ($z\alpha 7.96$) in case and control.

Conclusions: The finding shows significant factors for uterus prolapse were parity, gravida and age at last birth and work after delivery. Therefore civil society and concerned authority should work to raise awareness on the preventive measure of uterus prolapsed.

Keywords: risk factors, uterine prolapse.

INTRODUCTION

The problem of uterus prolapse (UP) exist throughout Nepal and affect women's quality of life. For women living with this condition, life's basic activities are a challenge, urinating, defecating, walking, standing and sitting are difficult and painful, which in turn leads various forms of psycho-social and physical disorders.^{1,2} Uterus prolapsed has increasing trend, as more women carry heavy loads after child birth, work strenuously and do not maintain a nutritious diet.^{3,4,5} Prevention can be possible tightening the pelvic floor muscles, as if trying to stop the uterine flow.²

METHODS

The study was conducted in 50 women having second and third degree of uterus prolapse who were admitted

in Dhulikhel hospital for vaginal hysterectomy. A total of 200 individuals were taken as a control who attend out patient department of Dhulikhel hospital without any sign and symptom of uterus prolapse. Data were collected by structured and semi-structured questionnaires using interview technique and analyzed by using z test.

RESULTS

Table 1. Education of Respondents.

| Educational Level | Case | | Control | |
|-------------------|------|------|---------|-------|
| | No. | % | No. | % |
| Illiterate | 49 | 98.0 | 96 | 48 |
| Literate | 1 | 2.0 | 104 | 52 |
| Total | 50 | 100 | 200 | 100.0 |
| p value <0.001 | | | | |

Correspondence: Shanta Gautam, JF Institute of Health Science Hattaban, Lalitpur, Nepal. Email: Shantagautam31@yahoo.com, Phone: 9849102822.

Table 2. Occupation of Respondents.

| Occupation | Case | | Control | |
|-----------------|------|-------|---------|-------|
| | No. | % | No. | % |
| Agriculture | 49 | 98.0 | 135 | 67.5 |
| Non Agriculture | 1 | 2.0 | 65 | 32.5 |
| Total | 50 | 100.0 | 200 | 100.0 |
| p value =0.0000 | | | | |

Table 3. Test of significance for between the case and control groups of Uterine Prolapse.

| Variables | Case (n=50) | Control (n=200) | z _α | p-value |
|---|----------------|--------------------|----------------|---------|
| Age of Respondents ($\bar{x} \pm SD$) | 48.6 ± 9.5 | 49.0 ± 9.4 | 0.27 | .138 |
| Parity of Respondents ($\bar{x} \pm SD$) | 4.4 ± 2.1 | 3.35 ± 1.72 | 3.40* | .040 |
| Gravida of Respondents ($\bar{x} \pm SD$) | 4.8 ± 2.3 | 3.5 ± 1.9 | 3.67* | .025 |
| Age on first child birth ($\bar{x} \pm SD$) | 20.4 ± 3.1 | 21.1 ± 3.5 | 1.39 | .972 |
| Age on Last child birth ($\bar{x} \pm SD$) | 31.1 ± 6.3 | 28.3 ± 5.5 | 2.88* | .003 |

* Significance at 5% SL (z test)

Parity of the respondents, gravida and age on the last child birth (.040, .025, .003 respectively) comprise significant difference being the case at higher rank.

The mean age of the respondents in the case group (50) was 48.6 ± 9.5 years with a range of 35, beginning from 32 and ending at 67 years while mean age of the control group (200) was 49 ± 9.4 years, ranging from 35 to 83 years. The mean age in combination of the control and case was recorded to be 48.9 years with standard deviation of 9.4 years. In the case group their first birth was at the age of 20.4 in average ± 3.1, whereas in the control group, women became mother after crossing their twenty first birthday (21.1 ± 3.5 years). However, there is no significant difference in the age at first child birth between the groups (z_α=1.39 at 5 % level of significance).

The study showed that the childbearing begins early at the age of 20.9 and ends before their 29th birthday (28.88 ± 5.7 years). The childbearing among the respondents had begun at the age of 15 and ended at 46 years. The average number of live births a woman produced was

recorded as 3.56 with standard deviation of 86 years. Comparing the performance of the last birth between the control and case groups show that control group stops childbearing earlier than the case group. The statistical relation shows a significant difference between the age in the case and control group in the case of last child birth (z_α = 2.88 at 5 % level of significance).

Two tailed test is applied to measure the significance difference between the designed groups to measure labor time during the child birth no significant difference were found. No significant difference in labor among the case and control groups in all chances disregarding the sign of the tested values. The p value in the first labor (p=0.137), second labor (p=0.344) third labor (p=0.928) and fourth labor (p=0.244) show the decreasing differences and t value of fifth (p=0.477), sixth labor (p=0.773) and more than sixth labor (p=0.381) consequently supports the null hypothesis of no differences among the groups.

Table 4. Differences between the causing variables of the UV prolapse.

| Variables | Case | Control | z _α |
|---|----------------------|------------------------|----------------|
| Duration of Rest after Delivery ($\bar{x} \pm SD$) | 10.28 ± 3.97 (n=50) | 41.35 ± 25.36 (n=200) | 16.53* |
| Days of Household Work Started ($\bar{x} \pm SD$) | 11.94 ± 8.16 (n=50) | 42.32 ± 25.37 (n=200) | 14.24* |
| Days of Heavy Load lifting Started ($\bar{x} \pm SD$) | 31.46 ± 34.47 (n=50) | 74.19 ± 31.68 (n=2000) | 7.96* |

*Significant difference in the rest after delivery between case and control group at 5% level of significance.

Unbiased mean of the variables stated in table 4 and their consecutive standard deviation between the case and control groups resulted to the situation where the null hypothesis of no differences has been rejected with 5% level of significance for the two tailed test. For valid generalizations to be made it has been asserted that the samples are in any way do not represent each other and for this reason the first stage is to show the significant difference between duration of rest after delivery (z_α=16.53), days of household work started (14.24) and days of heavy load lifting started (7.96) Because of the differences in the risk factors of the phenomena, the case group is prone to the urine prolapse.

There were significant difference among the groups in the problems of obesity (p=0.00021), while other variables

like problems of chronic cough ($p=0.00013$), problems of diabetes ($p=0.0000$), problems of chronic constipation ($p=0.00048$), problems of anemia ($p=0.000172$), problems of smoking ($p=0.00024$), problems of PID (0.001) and problems of STI (0.001) significantly differ from case to control.

DISCUSSION

There was no significant difference in the age at first child birth between the groups ($z_{\alpha}=1.39$ at 5 % level of significance). The other similar study showed that 92% of women get married under the age of 19 which indicates a high prevalence of early marriage, and the pattern has been found in all the ethnic groups.^{1,8}

The role of education found to be quite strong in the study. Almost all the illiterate women had uterus prolapse. Similar finding were reported that women who do not have access to education.¹ Parity, gravida and age on the last child birth (3.40, 3.67 and 2.88 respectively) comprise significant difference being the case at higher rank (in the case of last child birth $z_{\alpha}=2.88$ at 5 % level of significance).^{9,10,11,12} Age, parity, and weight were significantly associated with risk of prolapse.¹³ Pelvic floor disorders are very common and are strongly associated with female gender, ageing, pregnancy, parity and instrumental delivery.¹⁴ Among parous women, the odds for symptomatic pelvic organ prolapse increased with number of childbirths and were 3.3-fold higher among mothers of 4 than among mothers of one.⁶ Others similar findings showed that independent risk factors for prolapsed included age over 70, parity higher than 3, and menopause. Age, parity, menopause were significantly associated with stage of prolapsed.⁷ The prevalence of prolapse was significantly higher in women with higher parity.¹¹

The women in the case group gave an average of 4.44 births \pm 2.11 whereas the control group had lower level of births (mean 3.35 \pm 1.7). The two groups also significantly differ in their parity ($z_{\alpha}=3.40$) at 5% level of significance. Uterus prolapse occurs most commonly in women who have had more vaginal birth and unsafe delivery. Delivery by untrained (traditional) birth attendants, forced delivery, excess pressure on lower abdomen, prolonged labour, performing heavy work (lifting and carrying loads) during pregnancy and the post natal period, multiple births and poor nutrition. Causes related to diet and excess intra-abdominal pressure are mentioned.⁸

There was no difference on place of delivery in both groups. It was also reported that a total of 91% respondents gave birth in their own (husband's) house.¹

No significant difference in labor among the case and control groups in all chances disregarding the sign of

the tested values. As regard the duration of labor, the z value in the first labor (1.75), second labor (1.03) third labor (0.34) and fourth labor (0.48) show the decreasing differences and t value of fifth (0.10), sixth labor (0.85) and more than sixth labor (0.18) consequently supports the null hypothesis of no differences among the groups. There is no reasonable correlation could found between a long labor and occurrence of UP. However, it is possible that both the enumerators and the women may not have been accurate about timing¹.

As seen the work after delivery, result shows the significant difference between duration of rest after delivery ($z_{\alpha}=16.53$), days of household work started (14.24) and days of heavy load lifting started (7.96) in case and control. In general, women from most of the parts of Nepal start working soon after childbirth. In study showed that among the women with UP in the area, 40% start light work within 12-15 days. 32% start within 11 days. 26% start heavy work within 15 days. 2% even start heavy work in less than 6 days and another 3% start within 7-11 days. Comparing the type of food given to the women during post natal period and the work they have to perform, it was noted that women have insufficient nutritious food and rest during pregnancy and the post natal period. Heavy work load appears to be the most direct cause of UP, which points to a need for information and gender education within families.^{1,9}

Significant trends were observed with regard to smoking status and obesity and risk of prolapse. Social class, oral contraceptive use and height were not significantly associated with risk of prolapse. Thirty-five percent of the affected patients had a chronic obstructive pulmonary disease (COPD), 16% suffered from hypertension and 5% had diabetes mellitus. The majority of the women with uterine prolapse were of Newari origin (84%), and nearly all patients reported that they were working heavily during pregnancy as well as in the postpartum period (87%). It was found several risk factors for uterine prolapse in Nepal. Especially extensive physical labor during pregnancy and immediately after delivery, low availability of skilled birth attendants, and low maternal weight due to lack of nutritious food are mainly responsible for this common disease.¹⁰

CONCLUSIONS

The finding shows significant factors for uterus prolapse were parity, gravida and age of last birth, work after delivery. Health condition like chronic cough, constipation, smoking and anemia also showed differences in case group and control group. There were no difference in place of delivery and duration of labour in between two groups.

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